Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A system for assisting a driver operating a vehicle traveling on a road, the system comprising:

a reaction force device ~~that determines~~ configured to determine different reaction force values, the different reaction force values including a first reaction force value ~~respectively~~ based on stable information ~~and transient information~~ regarding the vehicle and an obstacle detected in a path of the vehicle and a second reaction force value based on transient information regarding the vehicle and the detected obstacle;

a weighting device configured to weight the second reaction force value based on at least one of a state of the detected obstacle and environment information around the vehicle;

a reaction force selection device configured to select one of the first and weighed second reaction force values;

a driver controlled input device manually operable by the driver; and

an actuator coupled to the driver controlled input device and ~~responsive to the reaction force device to selectively~~ configured to transmit the selected one of the first and weighed second reaction force values to the driver [[via]] by a reaction force input [[from]] via the driver controlled input device.

2. (Currently Amended) The system as recited in claim 1, wherein the stable information includes a speed of the vehicle and a distance from the vehicle to the obstacle, and the transient information includes the distance from the vehicle to the obstacle and a relative speed of the vehicle with respect to the obstacle.

3. (Currently Amended) The system as recited in claim 2, ~~wherein the reaction force device includes a~~ further comprising risk calculation ~~device that determines~~ devices configured to determine different risks of contact with the obstacle derived from the detected obstacle, the risk calculation devices including a first risk calculation device configured to determine a first risk derived from the detected obstacle during a stable period when the vehicle follows the detected obstacle and a second risk calculation device configured to determine a second risk

derived from the detected obstacle during a transient period partially overlapping the stable period ~~based on the stable information and the transient information~~.

4. (Currently Amended) The system as recited in claim 3, ~~wherein the reaction force device includes~~ further comprising a reaction force calculation device ~~that calculates~~ configured to determine the ~~different~~ first reaction force ~~values as a function of~~ value versus the determined first risk and the second reaction force value versus the determined second risk ~~different risks respectively~~.

5. (Currently Amended) The system as recited in claim 4, wherein the ~~reaction force device includes a~~ weighting device is configure to weight ~~that weights~~ the second reaction force value by multiplying the second reaction force value with a weighting multiplier ~~based on the transient information,~~ when a speed of the detected obstacle is greater than a predetermined speed value and an acceleration of the detected obstacle is less than zero, and [[a]] the reaction force selection device is configured to set a greater one of the first reaction force value and the weighted second reaction force value as the selected one reaction force value, ~~that selects the reaction force value with the greatest absolute value from among the reaction force value based on the stable information and the reaction force value based on the weighted transient information,~~ the reaction force selection device configured to provide ~~providing a signal to~~ the actuator with a signal that is indicative of the selected one reaction force value.

6. (Currently Amended) The system as recited in claim 5, wherein the reaction force device includes a first reaction force calculation device configured to determine the first reaction force value when activated and a second reaction force calculation device configured to determine the second reaction force value when activated, and further comprising a first target discrimination device ~~that determines~~ configured to determine whether the detected obstacle is a target obstacle by effecting a first target discrimination based on the speed of the vehicle and the distance from the vehicle to the detected obstacle, and a second target discrimination device ~~that determines~~ configured to determine whether the detected obstacle is a target obstacle by effecting a second target discrimination based on the distance from the vehicle to

the detected obstacle and the relative speed of the vehicle with respect to the detected obstacle, and wherein the first target discrimination device is configured to activate the first reaction force calculation device upon determination that the detected obstacle is the target obstacle, and the second target discrimination device is configured to activate the second reaction force calculation device upon determination that the detected obstacle is the target obstacle.

7. (Currently Amended) The system as recited in claim 6, further comprising:

a first repulsive force calculation device ~~determining~~ configured to determine a first repulsive force value versus the first risk;

a second repulsive force calculation device ~~determining~~ configured to determine a second repulsive force versus the second risk;

a repulsive force selection device ~~selecting the greatest one, in absolute value, among a set of repulsive force values including the first and second repulsive force values~~ configured to select a greater one of the first and second repulsive force values;

a correction amount calculation device ~~receiving the selected repulsive force value and determining a correction amount~~ configured to determine a correction amount for the selected repulsive force value; and

a correction device ~~reducing~~ configured to reduce a driving force applied to the vehicle in response to the correction amount.

8. (Currently Amended) The system as recited in claim 7, further comprising:

a sensor ~~detecting~~ configured to detect a driver power demand;

a driving force request generation device ~~receiving the driver power demand and generating~~ configured to generate a driving force request versus the detected driver power demand; and

~~an engine~~ a driving force controller configured to control ~~controlling~~ an engine of the vehicle in response to the driving force request for generation of [[the]] a driving force applied to the vehicle[[; and]],

wherein the correction device modifies, ~~in response to the determined correction amount, a relationship between~~ the generated driving force request ~~and the driver power~~

~~demand~~ in response to the determined correction amount in a direction of providing a reduction in the driving force applied to the vehicle.

9. (Currently Amended) The system as recited in claim 7, further comprising:

a sensor ~~detecting~~ configured to detect a driver brake demand;

a braking force request generation device ~~receiving the driver brake demand and generating~~ configured to generate a braking force request versus the detected driver brake demand; and

a ~~brake~~ braking force controller configured to control ~~controlling~~ a brake system of the vehicle in response to the braking force request for generation of a braking force applied to the vehicle[[; and]],

wherein the correction device modifies ~~a relationship between~~ the generated braking force request ~~and the driver brake demand~~ in response to the determined correction amount in a direction of providing an increase in the braking force applied to the vehicle.

10. (Currently Amended) The system as recited in claim [[5]] 4, wherein the weighting device performs the weighting of the second reaction force value ~~based on the transient information~~ when the ~~different~~ first and second risks are each greater than a predetermined value.

11. (Currently Amended) The system as recited in claim [[5]] 4, wherein the weighting device performs the weighting of the second reaction force value ~~based on the transient information~~ when the second reaction force value ~~is based on the transient information~~ is greater than the first reaction force value ~~based on the stable information~~ and the ~~different~~ first and second risks are each greater than a predetermined value.

12. (Currently Amended) The system as recited in claim [[5]] 4, wherein the weighting device performs the weighting of the second reaction force value ~~based on the transient information if~~ when the weighted second reaction force value ~~based on the transient information~~ is greater than the first reaction force value ~~based on the stable information~~ and [[that]] the ~~different~~ first and second risks are each greater than a predetermined value[[,]].

13. (Currently Amended) The system as recited in claim [[5]] 4, further comprising a scene recognition device that detects configured to detect an obstacle in the path of the vehicle, the scene recognition device determining being configured to provide data necessary for the system to determine whether the detected obstacle is stationary or in motion, and wherein the weighting device makes performs the weighting of the second reaction force value based on the transient information heavier upon determination that the detected obstacle is in motion than it does upon determination that detected the obstacle is stationary.

14. (Currently Amended) The system as recited in claim [[5]] 4, further comprising a scene recognition device that detects configured to detect an obstacle in the path of the vehicle, the scene recognition device being configured to provide data necessary for the system to determine determining whether or not the detected obstacle is being decelerated, and wherein the weighting device makes performs the weighting of the second reaction force value based on the transient information heavier upon determination that the detected obstacle is being decelerated than it does upon determination that the detected obstacle is not being decelerated.

15. (Currently Amended) The system as recited in claim 6,

wherein the first target discrimination device determines that the detected obstacle is the target obstacle when a time headway (THW), which is obtained by dividing the distance by the vehicle speed of the vehicle, is less than a first threshold value, and

wherein the second target discrimination device determines that the detected obstacle is the target obstacle when a time to collision (TTC), which is obtained by dividing the distance by the relative vehicle speed of the vehicle with respect to the detected obstacle, is less than a second threshold value.

16. (Original) The system as recited in claim 1, wherein the driver controlled input device includes at least one of an accelerator pedal and a brake pedal.

17. (Currently Amended) The system as recited in claim 3, ~~wherein the risk calculation device includes first and second risk calculation devices that respectively calculate first and second risks as the different risks, and the reaction force calculation devices includes first and second reaction force calculation devices that respectively calculate first and second reaction force values as the different reaction force values, the system~~ further comprising:

a first contact possibility discrimination device <u>configured to determine</u> ~~determining~~ whether or not the vehicle may come into contact with the detected obstacle by effecting contact possibility discrimination based on the distance and the ~~vehicle~~ speed <u>of the vehicle</u>;

a third risk calculation device <u>configured to determine</u> ~~determining~~ a third risk <u>derived</u> from the detected obstacle upon determination, by the first contact possibility discrimination device, that the vehicle may come into contact with the detected obstacle;

a third reaction force calculation device ~~determining~~ <u>configured to determine</u> a third reaction force value versus the <u>determined</u> third risk;

a second contact possibility discrimination device ~~determining~~ <u>configured to determine</u> whether or not the vehicle may come into contact with the detected obstacle by effecting contact possibility discrimination based on the distance and the relative ~~vehicle~~ speed <u>of the vehicle with respect to the detected obstacle</u>;

a fourth risk calculation device ~~determining~~ <u>configured to determine</u> a fourth risk <u>derived</u> from the detected obstacle upon determination, by the second contact possibility discrimination device, that the vehicle may come into contact with the detected obstacle; and

a fourth reaction force ~~calculating~~ <u>calculation</u> device <u>configured to determine</u> ~~determining~~ a fourth reaction force value versus the <u>determined</u> fourth risk, [[and]]

wherein ~~the set of reaction force values includes the third and fourth reaction force values in addition to the first reaction force value and the weighted second reaction force value, whereby~~ the reaction force selection device selects the greatest one among the first reaction force value, the weighted second reaction force value, the third reaction force value, and the fourth reaction force value.

18. (Currently Amended) A vehicle, comprising:

a scene recognition device <u>configured to detect</u> ~~detecting~~ an obstacle in the path of the vehicle;

a first target discrimination device ~~determining~~ configured to determine whether or not the detected obstacle is a target obstacle by effecting a first target discrimination based on a vehicle speed of the vehicle and a distance to the detected obstacle from the vehicle;

a first risk calculation device ~~determining~~ configured to determine a first risk of contact with the obstacle derived from the detected obstacle upon determination, by the first target discrimination device, that the detected obstacle is the target obstacle;

a first reaction force calculation device ~~determining~~ configured to determine a first reaction force value versus the [[fist]] determined first risk;

a second target discrimination device ~~determining~~ configured to determine whether or not the detected obstacle is a target obstacle by effecting a second target discrimination based on the distance to the detected obstacle from the vehicle and a relative vehicle speed of the vehicle with respect to the detected obstacle;

a second risk calculation device ~~determining~~ configured to determine a second risk of contact with the obstacle derived from the detected obstacle upon determination, by the second target discrimination device, that the detected obstacle is the target obstacle;

a second reaction force calculation device ~~determining~~ configured to determine a second reaction force value versus the determined second risk;

a weighting device ~~performing a weighting of~~ configured to weight the second reaction force value based on one of state of the detected obstacle and environment information around the vehicle;

a reaction force selection device ~~selecting the greatest~~ configured to select a greater one, in absolute value, ~~among a set of reaction force values including~~ of the first reaction force value and the weighted second reaction force value; ~~and providing an output signal indicative of the selected reaction force value;~~

a driver controlled input device manually operable by a driver; and

an actuator coupled to the driver controlled input device and configured ~~operative in response to the output signal~~ to transmit the selected ~~reaction force value~~ one of the first reaction force value and the weighted second reaction value to the driver [[via]] by a reaction force input [[from]] via the driver controlled input device.

19. (Currently Amended) A method for assisting a driver operating a vehicle traveling on a road by manually operating a driver controlled input device of the vehicle, the method comprising:

detecting an obstacle in the path of the vehicle;

determining whether or not the detected obstacle is a target obstacle by effecting a first target discrimination based on a vehicle speed of the vehicle and a distance to the detected obstacle from the vehicle;

determining a first risk of contact with the obstacle derived from the detected obstacle upon determination, by effecting the first target discrimination, that the detected obstacle is the target obstacle;

determining a first reaction force value versus the determined first risk;

determining whether or not the detected obstacle is a target obstacle by effecting a second target discrimination based on the distance to the detected obstacle from the vehicle and a relative vehicle speed of the vehicle with respect to the detected obstacle;

determining a second risk of contact with the obstacle derived from the detected obstacle upon determination, by effecting the second target discrimination, that the detected obstacle is the target obstacle;

determining a second reaction force value versus the determined second risk;

performing a weighting of weighting the second reaction force value based on one of state of the detected obstacle and environment information around the vehicle;

selecting a greater the greatest one, in absolute value, among a set of reaction force values including of the first reaction force value and the weighted second reaction force value and providing an output signal indicative of the selected reaction force value; and

transmitting the selected reaction force value one of the first reaction force value and the weighted second reaction force value to the driver by indicated by the output signal to the driver via a reaction force input via the from a driver controlled input device manually operable by the driver.

20. (Currently Amended) A system for assisting a driver operating a vehicle traveling on a road, the system comprising:

means for detecting an obstacle in front of the vehicle;

means to determine different reaction force values, including a first reaction force value based on stable information regarding the vehicle and an obstacle detected in a path of the vehicle and a second reaction force value based on transient information regarding the vehicle and the detected obstacle;

~~means for conducting one of different analyses of the detected obstacle to provide one of different partially overlapped periods allowing determination of a risk derived from the detected obstacle to give a variable;~~

means for weighting the second reaction force value based on at least one of a state of the detected obstacle and environment information around the vehicle;

means for selecting one of the first reaction force value and the weighed second reaction force value as ~~out of concurrently occurring ones of the variables to interconnect the variables into~~ a final variable ~~existing over at least two adjacent different periods~~; and

means for transmitting the final variable to the driver ~~via a haptic input~~.